



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/561,632

04/24/2006

Guenther Weiss

10191/4152

8448

26646

7590

07/01/2008

KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004

EXAMINER

PIERRE LOUIS, ANDRE

ART UNIT

PAPER NUMBER

2123

MAIL DATE

DELIVERY MODE

07/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/561,632	Applicant(s) WEISS ET AL.	
	Examiner ANDRE PIERRE LOUIS	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-21 and 23-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/13/2008 has been entered.
2. Claims 1-13 remain cancelled; and claims 14-21 and 23-25 are still pending and presented for examination.
3. Regarding the objection to the drawings, the Examiner withdraws the objection in view of the amendment.
4. As per the rejection under 35 USC 101, the Examiner withdraws the rejection in view of the amendment.
5. With regards to the rejection under 35 USC 112, the Examiner maintains the rejection, as Applicant fails to overcome the rejection (*see further clarification below*).

Response to Arguments

6. Applicant's arguments filed 5/13/2008 have been fully considered but they are moot, in view of the new grounds of rejection.
 - 6.1 While the applicants believe that the independent claims along with their dependencies should be found allowable, the Examiner respectfully disagrees and asserts that the combined references cited teach the entire claimed invention, as evidenced by the new grounds of rejection set forth below. The Examiner further asserts that the response to arguments along with the rejection below clearly support the Examiner's position in the rejection of the instant

claims. *However, the Examiner highly encourages the Applicant to take a look at the additional references cited not used located in the conclusion section of this and the previous office action.*

Double Patenting

7. Claims 14-16, 21 and 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16, 24-26 of copending Application No. 10/577,284. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the followings:

The claims of application No. 10/577,284 contain every element of the instant application and as such anticipates claim 14-16, 21, and 25 of the instant application. *In re Goodman*, 29 USPQ2d 2010 (CAFC 1993)

“ A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or anticipated by, the earlier claim. *In re Longi*, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); *In re Berg*, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to genus is anticipated by a patent claim to a species within that genus),” *ELI LILLY AND COMPANY v BARR LABORATORIES, INC.*, United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DICIDED: May 30, 2001).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8.1 Claims 14-21, 23-25 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: While the claims are directed to system and method for verifying and simulating of a control system, the step/arrangement does not set the simulation and/or verification of a control system of any kind, as intended by the applicant

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9.0 Claims 14-21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brayton et al. (U.S. Patent No. 6,823,280), in view of Stewart et al. (Design of Dynamically Reconfigurable Real-Time software Using Port-Based Objects, 12/1997).

9.1 In considering claims 14, 21, 25, Brayton et al. discloses a computer implemented method for simulation and verification of a control system under development, comprising: an arrangement for performing a plurality of simulation processes with corresponding memory modules and interface modules, wherein the memory modules include distinct memory locations for inter-module communication, and the system modules are dynamically reconfigured with each other (*fig.3-4, col.4 lines 18-62, col.5 lines 14-62; also see col. 8 line 63-col.9 line 48*). Although Brayton et al. does not specifically states that memory modules has distinct memory location, one of ordinary skilled in the art would clearly appreciate the approach taken by Brayton during his simulating and testing of the control system. Nevertheless, Stewart substantially teaches Design of Dynamically Reconfigurable Real-Time software Using Port-Based Objects, including facilitating communication of inter-modules via distinct memory locations (*see for example page 766-768 (section 4)*). Brayton et al. and Stewart are analogous art because they from the same field of endeavor and that the design analyzes by Stewart is similar to that of Brayton et al. Therefore it would have been obvious to one of ordinary skilled in the art to combine the system of Stewart with the simulation method and system of Brayton et al. because Stewart teaches the advantage of performing maintenance on the fly and real-time system implementation using time-based decomposition (*see section 2.1*).

9.2 Regarding claim 15, the combined teachings of Brayton et al. and Stewart substantially teach that the simulation is performed by running a control system simulation model, the simulation model including a number of sub-models being performed on one of the plurality of system modules, respectively (*see Brayton fig.4, col.4 lines 18-62*).

9.3 As per claims 16 and 23, the combined teachings of Brayton et al. and Stewart substantially teach that at least some of the system modules are dynamically reconfigurable for communication via distinct memory locations (*see Brayton et al. fig.3-4, col.5 lines 14-62, and col.6 line 58-col.7 line 10; also see Stewart pgs. 766-768*).

9.4 With regards to claim 17, the combined teachings of Brayton et al. and Stewart substantially teach the cross-bar switch for dynamic configuration of the distinct memory locations (*see Brayton et al. fig.3-4, col.6 line 58-col.7 line 40; also see col.10 lines 24-61*).

9.5 Regarding claim 18, the combined teachings of Brayton et al. and Stewart substantially teach that the interconnection scheme for coordination of the distinct memory locations (*see Brayton et al. fig.4, col.4 lines 18-62, col.10 lines 24-61; also see Stewart pages 761-768*).

9.6 As per claim 19, the combined teachings of Brayton et al. and Stewart substantially teach the host-target communication interface for connection of the simulation system with a simulation host, an input interface, and output interface (*see Brayton et al. col.1 lines 16-67; also see fig.4 col.3 line 1-col.4 line 62; also Stewart pgs.761-765*).

9.7 With regards to claims 20 and 24, the combined teachings of Brayton et al. and Stewart substantially teach that the modules includes at least one output port server for communication interconnection with respective output service of the other modules (*see Brayton et al. fig.1-2, col.4 lines 18-62; also see Stewart pgs.761-762*).

10. Claims 14-21, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (refer to herein as AAPA)), in view of Stewart et al. (Design of Dynamically Reconfigurable Real-Time software Using Port-Based Objects, 12/1997)..

10.1 In considering claims 14, 21, 25, AAPA substantially teaches a computer implemented method for simulation and verification of a control system under development, comprising: an arrangement for performing a plurality of simulation processes with corresponding memory modules and interface modules, wherein the memory modules include distinct memory locations for inter-module communication, and the system modules are dynamically reconfigured with each other (*see fig. 1-2, also applicant's background*). However, AAPA does not specifically states that memory modules has distinct memory location; but Stewart substantially teaches Design of Dynamically Reconfigurable Real-Time software Using Port-Based Objects, including facilitating communication of inter-modules via distinct memory locations (*see for example page 766-768 (section 4)*). Therefore it would have been obvious to one of ordinary skilled in the art to combine the system of Stewart with the AAPA because Stewart teaches the advantage of performing maintenance on the fly and real-time system implementation using time-based decomposition (*see section 2.1*).

10.2 Regarding claim 15, the combined teachings of AAPA and Stewart substantially teach that the simulation is performed by running a control system simulation model, the simulation model including a number of sub-models being performed on one of the plurality of system modules, respectively (*see AAPA fig. 1-2, also see Stewart page 760-768*).

10.3 As per claims 16 and 23, the combined teachings of AAPA and Stewart substantially teach that at least some of the system modules are dynamically reconfigurable for communication via distinct memory locations (*see Stewart pgs. 766-768*).

10.4 With regards to claim 17, the combined teachings of AAPA and Stewart substantially teach the cross-bar switch for dynamic configuration of the distinct memory locations (*see Stewart pages 760-768*).

10.5 Regarding claim 18, the combined teachings of AAPA and Stewart substantially teach that the interconnection scheme for coordination of the distinct memory locations (*see AAPA fig.1-2; also see Stewart pages 761-768*).

10.6 As per claim 19, the combined teachings of Brayton et al. and Stewart substantially teach the host-target communication interface for connection of the simulation system with a simulation host, an input interface, and output interface (*see pgs.761-765*).

10.7 With regards to claims 20 and 24, the combined teachings of Brayton et al. and Stewart substantially teach that the modules includes at least one output port server for communication interconnection with respective output service of the other modules (*see Stewart pgs.761-762*).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11.1 Hladky et al. (U.S. Patent No. 4,599,070) teaches an aircraft simulator and simulated control system therefor.

12. Claims 1-13, 22, and 26 remain cancelled and claims 14-21, 23-25 remain rejected; **THIS ACTION IS NON-FINAL**. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul L. Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. P. L/
Examiner, Art Unit 2123

June 25, 2008

/Zoila E. Cabrera/
Primary Examiner, Art Unit 2123